IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Prince, et al.

Title: METHOD AND APPARATUS FOR ADAPTIVE SERVICE INTERWORKING

App. No.: 09/198,067 Filed: 11/28/98

Examiner: Steven H.D. Nguyen Group Art Unit: 2665

Atty. Dkt. No. 1400.9800940

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
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BRIEF ON APPEAL

Dear Sir:

The following appeal brief is submitted pursuant to the notice of appeal filed April 27, 2004, in the above-identified application. Applicant/Appellant respectfully urges that the rejection of claims 1, 5-10, 13, and 17-19 is improper and requests a reversal of the rejections.

REAL PARTY IN INTEREST

As presently advised, Alcatel Canada Inc. is the real party in interest in this appeal by virtue of an executed Assignment of their entire interest from the inventors Michael Prince, Maged E. Shaker, Ken W. Young, Katherine Chan, and Henri R. Vandette to Newbridge Networks Corp., followed by a Change of Name from Newbridge Networks Corporation to Alcatel Networks Corporation dated May 25, 2000, and a Change of Name from Alcatel Networks Corporation to Alcatel Canada Inc. dated September 29, 2000. Applicant/Appellant encloses copies of the above-referenced Assignment, Petition, and Changes of Name.

RELATED APPEALS AND INTERFERENCES

As presently advised, there are no related Appeals or Interferences filed, pending, or decided.

STATUS OF CLAIMS

Claims 1-21 are pending in the present application. The Examiner has finally rejected claims 1, 5-10, 13, and 17-19. The Examiner has objected to claims 2-4 and 14-16. The Examiner has allowed claims 11, 12, 20, and 21. Applicant respectfully appeals the final rejection of pending claims 1, 5-10, 13, and 17-19.

STATUS OF AMENDMENTS

A response to the final Office action of October 23, 2003, was filed on December 29, 2003. However, as presently advised, no amendments have been made to the claims subsequent to final rejection.

SUMMARY OF THE INVENTION

Generally, the present invention provides a method and apparatus for adaptive service interworking. Such processing begins by obtaining connection information of a receiving end-point network switch in response to receiving a setup message from a sending party. The setup message identifies a receiving party, which is operably coupled to the receiving end-point switch. Such connection information may be obtained by sending an enhanced traffic descriptor appended to the setup message and receiving an enhanced traffic descriptor that was appended to a connection message from the receiving end-point switch. The connection information is then interpreted to determine whether the receiving end-point switch is capable of supporting a transparent link (e.g., a link between the sending and receiving end-point network switches that does not transform the data transport protocol of the end-point switches to a network data transport protocol). If the end-point network switch is capable of supporting the transparent link, the transparent link is established and utilized to transport data between the sending and receiving parties. With such a method and apparatus, a comprehensive service is provided to allow frame relay to frame relay switch virtual calls to carry any type of protocol without compromising frame relay to ATM switch virtual calls.

The present invention can be more fully described with reference to Figures 1 through 4. Figure 1 illustrates a schematic block diagram of a communication network 10 that includes a sending

party 12, a sending end-point switch 14, a communication network 16, a receiving end-point switch 18, and a receiving party 20. The sending and receiving parties 12 and 20 may be a router, a network coupled to a router, and/or an end user device such as a personal computer, facsimile machine, video telephone, and/or any device that receives and/or transmits data via a communication network. The end-point switches 14 and 18 may be a New Bridge Network Corporation's network switch such as the 36170 that is modified in accordance with the teachings of the present invention. Such modifications will be discussed in greater detail with reference to Figures 2 through 4.

To establish a communication path between the sending party 12 and the receiving party 20, the sending party sends a setup message 26 to the sending end-point switch 14. Such a setup message 26 includes setup information, headers and information elements. The setup information includes information regarding the particular type of data transport protocol the sending party is utilizing, accessing information (e.g., telephone number) of the receiving party, and identity of the sending party. For example, the sending party's data transport protocol may be frame relay, ATM, Internet protocol, etc. Upon receiving the setup message 26, the sending end-point switch 14 converts the data transport protocol into a network data transport protocol, such as an ATM protocol 24. In addition, the sending end-point switch appends a sending enhanced traffic descriptor (ETD) which identifies the data transport protocol between the sending party 12 and the sending end-point switch 14. Typically, such data transport protocol will be a particular type of frame relay protocol 22.

The sending end-point switch 14 transmits the converted ATM protocol setup message 28 via the communication network 16, which may include the public switch telephone network (PSTN), an ATM infrastructure, and/or the Internet, to the receiving end-point switch 18. The receiving end-point switch 18 converts the setup message back into a frame relay protocol 22 and provides it to the receiving party 20. In response, the receiving party generates a connection message 30, which is provided to the receiving end-point switch 18. If the receiving end-point switch is equipped to support the present invention, it appends a receiving enhanced traffic descriptor (ETD) to the connection message. In addition, the receiving end-point switch will convert the message into a network data transport protocol, such as the ATM protocol 24.

Upon receiving the ATM converted connection message 32, the sending end-point switch 14 interprets the message to identify the receiving enhanced traffic descriptor. Upon detecting the receiving enhanced traffic descriptor, the sending end-point switch establishes a transparent link between the sending party and the receiving party. A transparent link is one in which the sending end-point switch 14 and the receiving end-point switch 18 do not perform the conversion from one data transport protocol, which is used by the sending and receiving parties, to a network data transport protocol. For example, the end-point switches 14 and 18 will not perform a data transport conversion from a frame relay protocol 22 to an ATM protocol 24. The messages will be received in a frame relay format and transported to the other end-point switch in the frame relay format. Intervening switches within the communication network will receive the messages (frame relay data packets) and pass them on to the end-point switches 14 and 18. To achieve the transparent link, the non-converted data packets may need to include an identifier, which identifies that the packages are to be passed along to the end-point switches without processing. As such, when the end-point switches 14 and 18 are equipped with a setup processor, which will be discussed subsequently with reference to Figures 2 through 4, protocols (e.g., proprietary, older versions, etc.) not specified within the RFC 1483 specification may be utilized.

Figure 2 illustrates a schematic block diagram of the end-point switches 14 and 18 including a setup processor 40. The setup processor 40 includes a processing module 42 and memory 44. The processing module 42 may include a single processing entity or a plurality of processing entities. Such a processing entity may be a microprocessor, microcontroller, microcomputer, digital signal processor, central processing unit, state machine, logic circuitry, and/or any device that processes information based on operational and/or programming instructions. The memory 44 may be a single memory device or a plurality of memory devices. Such a memory device may be a read-only memory device, random access device, floppy disk, hard drive memory, CD memory, magnetic tape memory, DVD memory, and/or any device that stores digital information. Note when the processing module has one or more of its functions performed by a state machine and/or logic circuitry, the memory containing the corresponding operational instructions is embedded within the state machine and/or logic circuitry.

The memory 44 stores programming and/or operational instructions that allow the processing module to perform the methods illustrated in Figures 3 and 4. Figure 3 illustrates a logic diagram of a method for the sending end-point switch to support a transparent link. The process begins at step 50 where connection information of an end-point network switch is obtained in response to receiving a setup message from a sending party. The setup message identifies a receiving party and further includes the data transport protocol being used by the sending party. The connection information may be obtained from the end-point switch by appending a sending enhanced traffic descriptor to the setup message to create a modified setup message. The sending enhanced traffic descriptor indicates the data transport protocol of the sending party. Such a data transport protocol may be any one of the frame relay protocols. Having generated the modified setup message, it is provided through a network to the end-point switch. The end-point switch processes the sending enhanced traffic descriptor to determine whether the sending enhanced traffic descriptor is valid for the end-point network switch. In general, the sending enhanced traffic descriptor will be valid if the receiving end-point switch can interpret messages having the sending enhanced traffic descriptor. In essence, the enhanced traffic descriptors are proprietary communications between like switches (i.e., switches that include the se-up processor) to indicate when a transparent link can be established. If the receiving end-point switch has validated the sending enhanced traffic descriptor, it appends a receiving enhanced traffic descriptor to a connection response, which was generated by the receiving party. Note that the modified setup message may be translated into a network protocol (e.g., ATM) prior to sending to the end-point network switch. Further note that the connection information includes data transport protocol (e.g., frame relay, ATM, etc.) and/or a network switch type (e.g., New Bridge Network Corporation's network switch 36170).

The process then proceeds to step 52 where the connection information is interpreted to determine whether the end-point switch is capable of supporting a transparent link, which is a connection between the sending and the receiving end-point switches that does not translate the data transport protocol of the sending and receiving parties into the network data transport protocol. For example, if the sending and receiving parties are utilizing a frame relay data transport protocol, the transparent link is established without a translation into an ATM data transport protocol As such, data is sent from the sending to the receiving party in the frame relay data transport protocol. The interpretation done by the sending end-point switch includes determining whether the connection

response includes a receiving enhanced traffic descriptor. If not, the connection information is interpreted to indicate that the end-point network switch is incapable of supporting the transparent link.

The process then proceeds to step 54 where a determination is made as to whether the end-point switch is capable of supporting a transparent link. If so, the process proceeds to step 56 where the transparent link is supported between the sending and receiving party. If the end-point switch is not capable of supporting the link, the process proceeds to step 58 where the network configuration is set to a default service interworking translation. For example, the default service interworking translation may be converting frame relay data transport protocol packets into ATM data transport packets. Note that the determination of whether the end-point network switches are capable of supporting the transparent link is independent of whether both the sending and receiving parties are utilizing the same frame relay data transport protocol. In such cases, the transparent link is established and the sending and receiving parties communicate to determine the particular frame relay data transport protocol to utilize. As such, the present invention allows data transport protocols that are not within the current standards to be utilized by proprietary sending and receiving parties and/or older sending and receiving party equipment.

Figure 4 illustrates a logic diagram of a method for the receiving end-point network switch to support a transparent link. The process begins at step 60 where a setup message is received, wherein the setup message identifies the receiving party. The process then proceeds to step 62 where the setup message is interpreted to determine whether a transparent link is to be established. Such a determination may be made by extracting an enhanced traffic descriptor from the setup message, where the enhanced traffic descriptor includes identity of a data transport protocol of the sending party. Having done this, a determination is then made as to whether the data transport protocol of the receiving party is consistent with the data transport protocol of the sending party.

The process then proceeds to step 64 where a determination is made as to whether the transparent link is to be established. If so, the process proceeds to step 66, where the transparent link is supported. To support the transparent link, the receiving end-point network switch appends a receiving

enhanced traffic descriptor to a connection message to produce a modified connection message. The modified connection message is then transported to the beginning, or sending, end-point network switch that is operably coupled to the sending party. Note that the modified connection message may be converted, or translated, based on a network protocol.

If, however, the transparent link is not to be established, the process proceeds to step 68. At step 68 a default interworking translation is established. Such default service interworking translation may include converting frame relay data packets into ATM data packets.

The preceding discussion has presented a method and apparatus for providing adaptive service interworking. By allowing end-point network switches to establish a transparent link, data transport protocols that are not currently included in standards may be utilized. As such, older equipment may be able to take advantage of the newer network switches as well as devices that use proprietary data transport protocols.

ISSUES

The issues on appeal are as follow:

Are claims 1, 5-10, 13, and 17-19 patentable under 35 U.S.C. § 102(e) over Han et al. (U.S. Patent No. 6,222,844)?

GROUPING OF CLAIMS

Each of the claims introduces independently patentable subject matter and, therefore, stands or falls alone.

ARGUMENT

The Issues under 35 U.S.C. § 102(e) over Han et al.

The Examiner has rejected claims 1, 5-10, 13, and 17-19 under 35 U.S.C. § 102(e) as being anticipated by Han (U.S. Patent No. 6,222,844). Applicant respectfully disagrees.

For anticipation under 35 U.S.C. § 102, a reference must teach every aspect of the claimed invention either explicitly or implicitly. Any feature not directly taught must be inherently present. See MPEP 706.02 – distinction between 35 U.S.C. § 102 and § 103.

Regarding claims 1, 9, 13, and 18, while the Examiner states that Han discloses...obtaining connection information of an end point network switch, stating that Fig. 8, Ref. S210, receives a PVC connection between the source and destination), Applicant submits that the written disclosure of Han teaches away from the claimed invention. For example, step S201 of Han, which appears to be misidentified as step S210 in Fig. 8, is described as being an origination side PVC internetworking process step of receiving PVC internetworking requirement through an operator interface (col. 8, lines 48-51). As an origination side process step, it fails to disclose obtaining connection information of an end-point network switch,...wherein the receiving party is operably coupled to the end-point switch.

Moreover, Han fails to disclose the steps of interpreting the connection information to determine whether the end-point switch is capable of supporting a transparent link between the sending party and the receiving party and when the end-point switch is capable of supporting the transparent link, supporting the transparent link between the sending party and the receiving party. While the Examiner cites Fig. 8, Refs. 205-207, Applicant notes that Han describes steps S205-207 as "change the state of VPI/VCI to in use," "confirm the PCR which ATM PVC corresponded to the frame relay connection uses in the occupancy state," and "transmit the message for the PVC internetworking requirement to the destination side process," respectively (col. 8, line 63, to col. 9, line 2), none of which disclose the above-referenced steps. Thus, the written disclosure of Han contradicts the Examiner's assertion, citing Fig. 8, Ref. 205-207, that Han discloses "the interworking unit determines if the destination side support a transparent or translation mode; if the destination side support a transparent mode, the interworking unit will establish a transparent link; it is inherently disclosed in FR/ATM interworking unit based on the agreement in FRF.8 based on the upper layer protocol which is registered in the database is transparent mode."

Furthermore, for example, Figs. 6 and 7 of Han et al. illustrate a process including step S102 "to verify an input parameter distinguished into Mandatory and Optional," (col. 7, lines 17 and 18) wherein the "Optional parameter appoints an upper layer protocol form (Transparent, Translation)"

(col. 7, lines 26 and 27) and step S113 "to output the message about that the frame relay connection registration has completed to system console" (col. 8, lines 36-38) and, "[a]t this time, to output VPI/VCI and PCR corresponded to the inputted parameter and frame relay connection, to end the frame relay connection registration process" (col. 8, lines 38-41). Figs 8-10 of Han et al. illustrate a process including step S203 "to confirm VPI/VCI and PCR, retrieving the frame relay connection information shown in Fig. 3(c)" (col. 8, lines 56-58) and step S210, as cited by the Examiner, wherein "if it is determined that PVC interworking is normally performed analyzing the message received from the destination side, to perform the next step, if not, to perform the 13 step (S213)" (col. 9, lines 10-13).

As step S203 retrieves the frame relay connection information that was output at the time of step S113, step S113 must necessarily precede step S203. Consequently, according to the teachings of Han et al., step S102 must necessarily precede step S210. Thus, the teachings of Han et al. contradict the Examiner's assertion that "Han discloses in Figs. 5-7, the subscribers register with network; the connection information is stored in the database when the interworking of the switch receive a call setup for established a PVC between the endpoint of the switches, step 210 and Fig. 1, the interworking unit must obtain the connection information of the destination switch in order to send a setup message to destination switch and determining the connection information is transparent or translation connection; if the connection is transparent, then establishing a transparent link; See Figs. 8-10 and col. 7, lines 26-30 as set forth in claims 1, 9, 13, and 18." As the processes of Han et al. do not establish a causal relationship that would allow step S102 of verifying an input parameter such as an Optional parameter that "appoints an upper layer protocol form (Transparent, Translation)" to occur in response to step S210 involving "analyzing the message received from the destination side," Han et al. logically cannot teach the purported teachings ascribed to Han et al. by the Examiner. Therefore, Applicant submits that the Examiner has not established a *prima facie* case of the teachings of Han et al. anticipating the rejected claims of the present application.

Specifically regarding claim 1, Applicant notes that the step of "...obtaining..." occurs "in response to receiving a set-up message from a sending party." Applicant submits that the particular features of claim 1 are not anticipated by the Han et al. reference. Thus, Applicant submits that claim 1 is in condition for allowance.

Specifically regarding claim 9, Applicant notes that the step of "...interpreting..." states "...wherein the transparent link does not transform a data transport protocol to a network data transport

protocol...." Applicant submits that the particular features of claim 9 are not anticipated by the Han et al. reference. Thus, Applicant submits that claim 9 is in condition for allowance.

Specifically regarding claim 13, Applicant notes that the set-up processor comprises memory, "wherein the memory includes operating instructions that cause the processing module to (a) obtain connection information of an end-point network switch in response to receiving a set-up message from a sending party...." Applicant submits that the particular features of claim 13 are not anticipated by the Han et al. reference. Thus, Applicant submits that claim 13 is in condition for allowance.

Specifically regarding claim 18, Applicant notes that the set-up processor comprises memory, "wherein the memory includes operating instructions that cause the processing module to...(b) interpret the set-up message to determine whether a transparent link is to be established between the sending party and the receiving party, wherein the transparent link does not transform a data transport protocol to a network data transport protocol...." Applicant submits that the particular features of claim 18 are not anticipated by the Han et al. reference. Thus, Applicant submits that claim 18 is in condition for allowance.

For the foregoing reasons, Applicant submits that none of claims 1, 9, 13, or 18 are anticipated by the Han et al. reference. Thus, Applicant submits that claims 1, 9, 13, and 18 are in condition for allowance.

Regarding claims 5 and 6, the Examiner states that Han discloses the connection information comprising at least one of a data transport protocol and a network switch type, citing Fig. 3c, Ref. OMCM, as disclosing a database which stores a network switch type for supporting transparent link and ATM protocol such as D_ULPT), and wherein the network switch type can be used to process the enhanced traffic description, citing Fig. 3c, traffic description such PCR. Also, the Examiner states, "Han discloses the connection parameters comprising at least one of the upper layer protocol 'read on data transport protocol' and switch type and traffic descriptor 'read on PCR, Be, Bc, CIR' as set forth in claims 5 and 6." Applicant respectfully disagrees. Applicant notes that D_IN_ULPT 37 is described as illustrating "an upper layer protocol of the frame relay connection, means Transparent and Translation mode" (col. 5, lines 10-12). Applicant can find no further explanation of the "upper layer protocol" that could arguably tend to relate it to the claimed invention. Moreover, the conjunctive union of Transparent and Translation in apparently a single mode in Han appears to teach away from the claimed invention, even if one were able to determine that the terms Transparent and Translation of

Han have similar meanings to such terms in the present application (for which the Examiner has not presented evidence). Moreover, Applicant reiterates the argument presented above that information such as D_IN_ULPT 37, which is illustrated in Fig. 3(c) is retrieved in step S203, which precedes step S210 involving "analyzing the message received from the destination side."

Moreover, Applicant respectfully disagrees with the Examiner's assertion that the PCR of Han discloses an enhanced traffic descriptor such that an end-point switch is capable of processing an enhanced traffic descriptor. Rather, Han merely teaches that it "computes PCR (Peak Cell Rate) corresponded to CIR)" (col. 5, line 67, to col. 6, line 1), not that an end-point network switch is capable of processing an enhanced traffic descriptor.

Moreover, Applicant respectfully disagrees with the Examiner's assertion that the "PCR, Be, Bc, CIR" of Han et al. discloses a switch type and an enhanced traffic descriptor such that an end-point switch is capable of processing an enhanced traffic descriptor. Rather, Han merely teaches that it "computes PCR (Peak Cell Rate) corresponded to CIR (Committed Information Rate)" (col. 5, line 67, to col. 6, line 1) and that a "BC (Committed Burst Size), Be (Excess Burst Rate)" are appointed (col. 7, lines 22-26), not that an end-point network switch is capable of processing an enhanced traffic descriptor.

Specifically regarding claim 6, Applicant notes that claim 6 states, "...wherein the network switch type further comprises the end-point network switch being capable of processing an enhanced traffic descriptor." Applicant submits that such feature is not anticipated by the Han et al. reference. Thus, Applicant submits that claim 6 is in condition for allowance.

For the foregoing reasons, Applicant submit that neither of claims 5 or 6 are anticipated by the Han et al. reference. Thus, Applicant submits that claims 5 and 6 are in condition for allowance.

Regarding claim 7, the Examiner states that Han discloses the receiving party is a user, citing Fig. 5, subscriber. Applicant respectfully disagrees. Applicant submits that the cited portion of Fig. 5 does not disclose the limitations of claim 7 subject to the limitations of base claim 1. Thus, Applicant submits that claim 7 is in condition for allowance.

Regarding claims 8 and 17, the Examiner states that Han inherently discloses the service interworking being default to translation if the endpoint network does not support transparent link.

However, the Examiner provides neither explanation nor citation of any portion of Han to support the Examiner's contention.

Specifically regarding claim 17, Applicant notes that claim 17 pertains to memory, "wherein the memory further comprises operating instructions that cause the processing module to: default to service interworking translation when the end-point network switch in not capable of supporting the transparent link." Applicant submits that such feature is not anticipated by the Han et al. reference. Thus, Applicant submits that claim 17 is in condition for allowance.

For the foregoing reasons, Applicant submits that neither claim 8 nor claim 17 is anticipated by the Han et al. reference. Thus, Applicant respectfully disagrees and submits that claims 8 and 17 are in condition for allowance.

Regarding claims 10 and 19, the Examiner states that Han inherently discloses extracting an enhanced traffic descriptor which identifies the data transport protocol from the setup message to determine if the receiving party supports the data transport protocol of sending party in order to establish a transparent link between the users, stating that the interworking unit must extract protocol identifier in order to recognize if the destination interworking unit supports this protocol or not. However, Applicant submits that the Examiner does not cite any portion of Han to support the Examiner's contention. Moreover, even if the Examiner's inference were valid, it would not necessarily anticipate the claimed invention.

Specifically regarding claim 19, Applicant notes that claim 19 pertains to memory, "wherein the memory further comprises operating instructions that cause the processing module to: extract an enhanced traffic descriptor...and determine that the data transport protocol of the receiving party is consistent with the data transport protocol of the sending party." Applicant submits that such feature is not anticipated by the Han et al. reference. Thus, Applicant submits that claim 19 is in condition for allowance.

For the foregoing reasons, Applicant submits that neither claim 10 nor claim 19 is anticipated by the Han et al. reference. Thus, Applicant submits that claims 10 and 19 are in condition for allowance.

CONCLUSION

For the reasons advanced above, Applicant respectfully urges reversal of the rejection of claims 1, 5-10, 13, and 17-19.

Respectfully submitted,

10/27/2004
Date

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APPENDIX

1. (Previously presented) A method for adaptive service interworking, the method comprises the steps of:

a) in response to receiving a set-up message from a sending party, obtaining connection information of an end-point network switch, wherein the set-up messages identifies a receiving party, and wherein the receiving party is operably coupled to the end-point network switch;

b) interpreting the connection information to determine whether the end-point network switch is capable of supporting a transparent link between the sending party and the receiving party; and

c) when the end-point network switch is capable of supporting the transparent link, supporting the transparent link between the sending party and the receiving party.

2. (Original) The method of claim 1, wherein step (a) further comprises:

appending a sending enhanced traffic descriptor to the set-up message to create a modified set-up message;

providing the modified set-up message to a network;

processing, by the end-point network switch, the sending enhanced traffic descriptor to determine whether the sending enhanced traffic descriptor is valid for the end-point network switch; and

when the sending enhanced traffic descriptor is valid, appending, by the end-point network switch, a receiving enhanced traffic descriptor to a connection response to produce a modified connection response, wherein the connection response was received from the receiving party.

3. (Original) The method of claim 2, wherein step (b) further comprises:

when the sending enhanced traffic descriptor is invalid, providing, by the end-point network switch, the connection response; and

when the connection response is received without the receiving enhanced traffic descriptor, interpreting the connection information to indicate that the end-point network switch is incapable of supporting the transparent link.

4. (Original) The method of claim 2 further comprises translating the modified set-up message to a network protocol prior to sending to the end-point network switch.

5. (Original) The method of claim 1, wherein the connection information further comprises at least one of: a data transport protocol and a network switch type.

6. (Original) The method of claim 5, wherein the network switch type further comprises the end-point network switch being capable of processing an enhanced traffic descriptor.

7. (Original) The method of claim 1, wherein the receiving party is at least one of: a router, a network coupled to the router, and an end-user.

8. (Original) The method of claim 1 further comprises defaulting to service interworking translation when the end-point network switch is not capable of supporting the transparent link.

9. (Previously presented) A method for adaptive service interworking, the method comprises the steps of:

a) receiving a set-up message that identifies a receiving party;

b) interpreting the set-up message to determine whether a transparent link is to be established between a sending party and the receiving party, wherein the transparent link does not transform a data transport protocol to a network data transport protocol; and

c) when the transparent link is to be established, supporting the transparent link.

10. (Original) The method of claim 9, wherein step (b) further comprises:

extracting an enhanced traffic descriptor from the set-up message, wherein the enhanced traffic descriptor includes identity of a data transport protocol of the sending party; and

determining that a data transport protocol of the receiving party is consistent with the data transport protocol of the sending party.

11. (Previously presented) A method for adaptive service interworking, the method comprises the steps of:

a) receiving a set-up message that identifies a receiving party;

b) interpreting the set-up message to determine whether a transparent links is to be established between a sending party and the receiving party; and

c) when the transparent link is to be established, supporting the transparent link, appending a receiving enhanced traffic descriptor to a connection message to produce a modified connection message, and transporting the modified connection message to a beginning end network switch operably coupled to the sending party.

12. (Original) The method of claim 11 further comprises converting the modified connection message based on a network protocol.

13. (Previously presented) A set-up processor comprises:

a processing module; and

memory operably coupled to the processing module, wherein the memory includes operating instructions that cause the processing module to (a) obtain connection information of an end-point network switch in response to receiving a set-up message from a sending party, wherein the set-up messages identifies a receiving party, and wherein the receiving party is operably coupled to the end-point network switch; (b) interpret the connection information to determine whether the end-point network switch is capable of supporting a transparent link between the sending party and the receiving party; and (c) support the transparent link between the sending party and the receiving party when the end-point network switch is capable of supporting the transparent link.

14. (Original) The set-up processor of claim 13, wherein the memory further comprises operating instructions that cause the processing module to:

append a sending enhanced traffic descriptor to the set-up message to create a modified set-up message;

provide the modified set-up message to a network; and

receive a receiving enhanced traffic descriptor appended to a connection response when the sending enhanced traffic descriptor is valid with respect to the end-point network switch.

15. (Original) The set-up processor of claim 14, wherein the memory further comprises operating instructions that cause the processing module to:

receive the connection response when the sending enhanced traffic descriptor is invalid with respect to the end-point network switch; and

interpret the connection information to indicate that the end-point network switch is incapable of supporting the transparent link when the connection response is received without the receiving enhanced traffic descriptor.

16. (Original) The set-up processor of claim 14, wherein the memory further comprises operating instructions that cause the processing module to: translate the modified set-up message to a network protocol prior to sending to the end-point network switch.

17. (Original) The set-up processor of claim 13, wherein the memory further comprises operating instructions that cause the processing module to: default to service interworking translation when the end-point network switch is not capable of supporting the transparent link.

18. (Previously presented) A set-up processor comprises:

a processing module; and

memory operably coupled to the processing module, wherein the memory includes operating instructions that cause the processing module to (a) receive a set-up message that identifies a receiving party; (b) interpret the set-up message to determine whether a transparent link is to be established between the sending party and the receiving party, wherein the transparent link does not transform a data transport protocol to a network data transport protocol; and (c) support the transparent link when the transparent link is to be established.

19. (Original) The set-up processor of claim 18, wherein the memory further comprises operating instructions that cause the processing module to:

extract an enhanced traffic descriptor from the set-up message, wherein the enhanced traffic descriptor includes identity of a data transport protocol of the sending party; and

determine that a data transport protocol of the receiving party is consistent with the data transport protocol of the sending party.

20. (Previously presented) A set-up processor comprises:

a processing module; and

memory operably coupled to the processing module, wherein the memory includes operating instructions that cause the processing module to (a) receive a set-up message that identifies a receiving party; (b) interpret the set-up message to determine whether a transparent link is to be established between the sending party and the receiving party; (c) support the transparent link when the transparent link is to be established; (d) append a receiving enhanced traffic descriptor to a connection message to produce a modified connection message; and (e) transport the modified connection message to a beginning end network switch operably coupled to the sending party.

21. (Previously presented) The set-up processor of claim 20, wherein the memory further comprises operating instructions that cause the processing module to convert the modified connection message based on a network protocol.